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June 2011

Online at <http://mpra.ub.uni-muenchen.de/52445/>

MPRA Paper No. 52445, posted 9. January 2014 05:23 UTC

Air and sea transport: Competition strategies under normal and economic crisis environments

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Abstract

Air and sea passenger transport were generally considered as serving different market segments with little competition between them. Recent research has however shown that the existence of a deregulated operating framework can lead to improved competition between the two modes. This article aims first to identify the circumstances under which air and sea transport compete. The second step is to further examine possible reactions to increase their competitive relationship. The Greek Aegean region presents an interesting case study due to its morphology and seasonal demand characteristics. The question on competitive strategies has become even more essential in an environment of economic crisis as that existing currently in the region.

JEL Classification: R41, R11, 018

Keywords: Air and Sea Transport, Passenger Transport, Insular Regions, Competition, Economic Crisis

1. Introduction

The comparison between air and sea transport presents an interesting and rare case in the transport field. It is mainly observed in the service of insular regions and is further defined by existence or absence of infrastructure. The characteristics of these two modes, suggest that they will be operating in a more complementary role. While travelling by air has the advantage of speed, shortcomings relate to volume and cost – the two main advantages of sea transport. Therefore even though these modes appear to “specialise” as far as freight is concerned, passenger travel comes up as common ground for the two. Even so, the traditional view is that these modes operate in different markets as they serve passengers with different needs and characteristics. A review of the literature revealed that the operating framework can play a role in this. The expected benefit of market deregulation is increased competition, which can lead to reduced fares, better frequency and service levels. This is not only limited in the scope of a single transport mode, but in many cases the effects are going to expand to other modes operating in the same area, thus affecting competition between modes as well. In this respect, an attempt is made to identify the circumstances under which air and sea transport can develop a competitive relationship. This paper embarks also on a discussion over possible strategies that these two modes can follow in order to

increase their competitive position, especially in the current difficult conditions presented by the current economic crisis. An examination of the market is conducted along with the results of a passenger survey in an attempt to address these issues.

Greece's geographical features and the importance of the islands indicate that the Aegean region could prove to be a common ground for competition between these two modes of transport. The transport needs of more than 200 inhabited islands are today served by a network of 24 airports and 90 seaports. Both population density and distance from the capital Athens vary. Demand for transport services is highly seasonal, with the summertime peak period, fuelled mainly by tourism, being significantly higher. Therefore the Aegean provides a unique area to examine this situation, as it offers a rich and interesting mix of cases.

The transport needs of the passengers were mainly covered through sea transport, with air transport making its gradual appearance since the middle of last century. During the previous decades these two modes have operated in a heavily regulated environment, both covering specific market segments with almost no competitive relation between them. As of the 1990s, with the application of the EU transport policies promoting deregulation, these markets had to evolve. Deregulation in both markets has already some years behind it, with some early indications that it had succeeded in promoting competition within and to some extent between the markets. This process however has lately been affected by the difficult economic environment.

2. Evidence from the literature

In developing the common market, the European Union, has promoted deregulation in the transport sector. The theoretical results of such a process in the transport field are well examined (for example Banister and Button 1991). The results relate mainly to improvements in fare and service levels as well as changes in the networks, favouring the development of hub and spoke systems (Bourghouwt and de Wit 2003). The positive effects will more than likely expand to the smaller regions and to the leisure market, provided that they are well prepared to operate in the new environment (Papatheodorou 2002, Graham 1997).

Competition between transport modes and modal choice behaviour in general has been examined in depth (Ben-Akiva et al. 1999). Furthermore, transport services are of high significance to island areas and their economies as they provide a vital lifeline (Begg et al 1996). These areas were expected to benefit from aviation deregulation as well (Papatheodorou and Busuttil 2003). On the maritime field, a similar examination of the inter-island passenger seemed to suggest that improvements in the transport field through competition would reflect positively in the island economy (Luis 2002). An extensive literature exists on competitive strategies as well, which, however, is mostly limited within the same mode (for example Wei and Hansen 2005, O'Connell and Williams 2005).

The literature review showed that the specific case of competition between air and sea transport has not been fully explored. A number of researchers had attempted to assess the possible relationship between these two modes under a deregulated environment (Goulielmos 1996, Profillidis 1996); finally concluding that it would have the benefits foreseen by the theory. This view was also enhanced by the example of the deregulation of the UK-Ireland air market, whose indirect impact included the opening of the sea market and the reduction of sea fares (Barrett 1997). Initial attempts to explore how passengers regarded air and sea transport relationship in the the Aegean insular region were undertaken by Sambracos and Gatzoli (1996) and later

by Sambracos (2001). The traditional and long established attitude was that these two modes operated in different market segments. Maritime transport tended to attract leisure and cost conscious passenger categories. On the other hand air transport was preferred by business travellers and persons with an improved financial situation. Market deregulation was expected to increase competition between the two modes, with passengers benefiting from lower prices and higher service levels. The examination of the first results of the deregulation process seemed to support the theoretical approach. Improvements in both modes appeared to have increased competition (under certain conditions) thus creating a new environment (Rigas 2009, Sambracos and Rigas 2007, Spathi 2005, Polydoropoulou 2005).

It should also be noted that the positive effects of deregulated frameworks in general have come under some criticism as the main assumptions of the theory are not easily found in the real world, with the result being that the markets tend to revert to oligopolistic or monopolistic forms (Mattoo 2001). Researchers have expressed the view that air traffic will tend to revert to monopolistic forms, unless the demand for travel is sufficiently high and that the operational framework is capable to protect the form of the market (McHardy and Trotter 2006). In the EU, in order to protect and develop remote regions a number of Member States are applying Public Service Obligations (PSO's) to various extents in domestic air transport (Williams and Pagliari 2004). In the maritime sector, as already stated, PSO's have been in effect for many years (Sambracos et al 2005).

3. Looking into the market

3.1 The operating framework

The passenger market of the Aegean was highly regulated up to the beginning of the 1990s. Air services were offered by the state owned Olympic Airways (OA) covering a network 24 islands. A radial network ensured a generally adequate connection of each destination with Athens, with the main problem being congestion and inadequate service, especially during peak demand periods. For the sea transport, the market structure could be characterized as a diversified oligopoly in nature. A small number of private operators provided passenger transport services, offering a lightly diversified product. The main problems included the aging fleet (reduced speed, delays, and breakdowns), insufficient port facilities, highly seasonal demand and a centralized network structure (with Piraeus being the centre). The state played a very important role in this market, by controlling the entry of enterprises in the market, the network, and the fare ranges. Under this regulated environment, operators were able to compete only on quality factors (Sambracos and Gatzoli 1997).

The developments introduced from 1990 onwards led to a change in the market environment. In air transport, during 1991 new legislation was introduced, which allowed operators besides OA to gradually start air transport activities in Greece. As of 1998, domestic scheduled services were opened throughout the Greek region, thus terminating the long held state monopoly through OA.

Regarding sea transport, the market was expected to be opened by 2004, following Greece's derogation from EU legislation allowing cabotage in the Member States. The market conditions and the need to prepare the market for the Athens 2004 Olympic Games, allowed for an earlier date of cabotage liberalization, as of 2002. The state through various organizations retains the supervision of the market, in order to ascertain safety and the quality of services, as well as to protect the economic

development of the island regions. Public service obligations continue to be imposed through the awarding of licenses, and the State retains the right to sign contracts for exclusive use of certain lines should this be deemed necessary in case the island regions are not adequately served.

3.2 Market Reactions

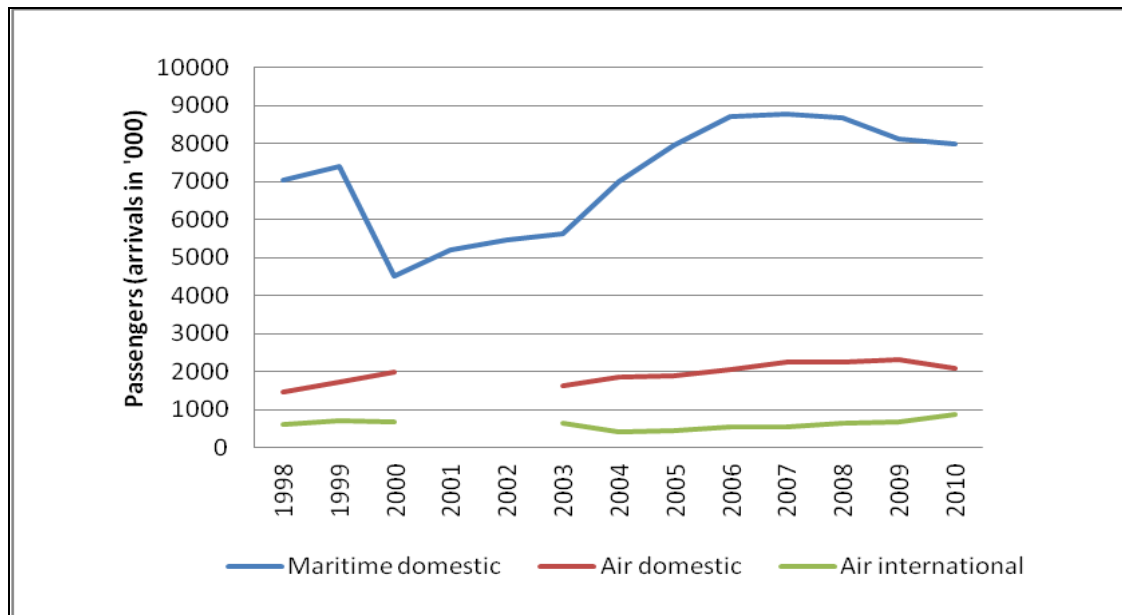
The domestic air market was the first to be opened. A number of new operators entered the market, with most of them being unsuccessful. The reasons for this can be attributed to a number of factors, such as lack of knowledge of the airline business, lack of capital, poor management and OA's dominant position. The strong competition that developed eventually settled in a form of oligopoly. In 1999 there were four companies licensed to provide schedule passenger services. However, 2001 proved to be a difficult financial year for Greek airlines, heavily affected by the post 9/11 era. 2001 was also the year that the new Athens airport became operational. While many of the problems that airline operations had to face in the past were reduced significantly (congestion, delays, low service quality), this came at the cost of higher operation fees. Without the existence of alternate airports to operate from (like Stanstead or Luton in the UK) many airlines found it difficult to operate in a competitive environment with already low profit margins. The result was the survival of only two airlines. The market seemed eventually to stabilise and showed signs of improvements. OA was privatised and by 2008 new entrants tried to compete in the market (especially competing for the PSO lines). Nevertheless, the intense competition in the market in connection with the worsening economic conditions led to an attempt of the two main airlines merge.

For the Aegean sea passenger market the beginning of the decade was mainly a time for preparation for the upcoming deregulation. Older vessels were replaced by new technology ones in an effort to make travelling by ship more attractive. Still, low service levels (especially in network coverage and frequency) remained. In 2004, more than 300 vessels of various types were serving the entire Greek network, with almost 70% of them operating in the Aegean. Most of the vessels were of Ro-Ro type allowing passengers to bring their cars to their island destination (a significant market segment). During the first years, the form of the market did not change, as hardly any new companies entered the market. As the regulatory framework started to relax, the existing companies expanded their operations into other lines, thus increasing competition between them. After 2004, in most major lines passengers have the option to choose between two operators. The form of the market however, cannot be considered as completely competitive. Here too the market stabilised for a number of years, however it was not shielded from the economic crisis. Increased operational costs, higher cost of borrowing and a drop in passenger demand threatened the survival of the operators. As of 2008, the signs of a consolidation process in the market are evident.

3.3 Demand Levels

Demand appears to have increased for both markets following deregulation as can be seen in Figure 1. A large proportion of this demand can be attributed to tourist movements. These are in turn influenced by global events relating to international air travel, as almost 90% of tourists arrive in Greece by airplane. On the other hand, maritime demand in the Aegean is almost exclusively domestic in nature.

Figure 1
Passenger demand in the Aegean 1998-2010



Note: air transport data for 2001 and 2002 are not available.

Source: EUROSTAT, own calculations.

Concentrating now on the domestic market, the difference in price levels has played an important role. It should also not be overlooked that although airplanes benefit from shorter journeys, ferries offer a significantly larger network (more than 90 destinations against than 30 with air connections). These two factors can help explain the difference in demand levels between the two modes. Following an initial decrease in demand, passenger levels in the Aegean have increased significantly in the first years of deregulation since 2006. This demand stabilised till 2008, after which the effects of the crisis begin to appear. The aviation market on the other hand, while on a positive course, did not show the same rate of increase. The general trend however remains the same. An interesting observation is the increase in the international air demand appearing after 2008.

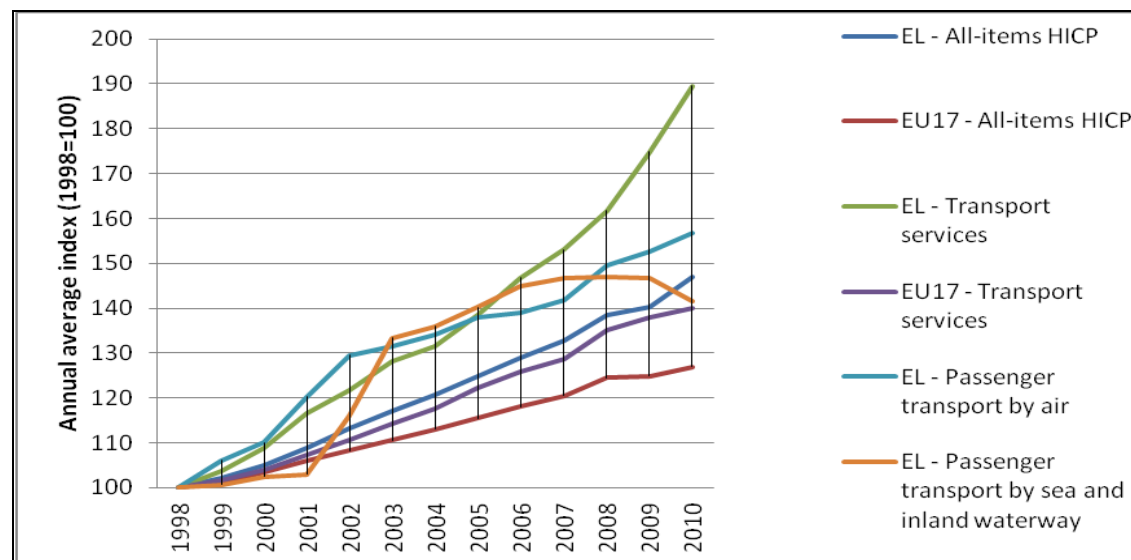
3.4 Fare levels

The absence of complete and accurate data regarding fare levels has been noted by researchers in the past (Spathi 2005). Even though the multitude of fares offered in different periods (including promotions) by both modes makes keeping track of actual prices highly difficult, a couple of general rules can be identified, such as that fares are understandably affected by distance, with longer destinations (like the Dodecanese) showing constantly higher fare levels for both modes. Boat fares are also quite lower than those charged for air travel (in some cases being less than 50%).

It is, however, possible to follow the development of transport prices through the information available in the EUROSTAT database. Figure 2 presents the evolution of the Harmonised Indices of Consumer Prices (HICP) for selected categories, for Greece (EL) and the Eurozone countries (EU-17) for the period 1998 – 2010. The picture that emerges is that both transport modes have followed a period of sharp increase in price levels after the introduction of competition, with price levels generally stabilising and following more-or-less the general index after 2003. As of

2008, though, the reaction of the two modes differs. While maritime transport shows a stabilisation followed by a decrease in 2010, this is not the case for aviation, which continues to follow the general index.

Figure 2
Harmonised indices of consumer and transport prices for Greece and the Eurozone



Note: 1998 = 100

Source: EUROSTAT, own calculations.

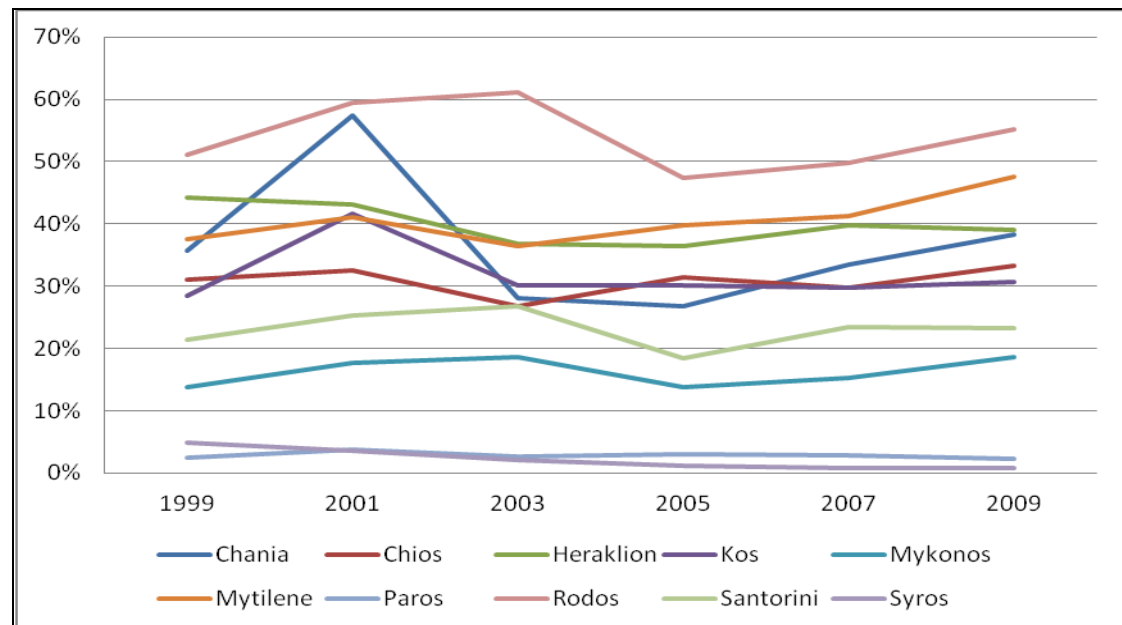
3.5 Travel choices of the passengers

The next step is to examine how passengers chose to travel to islands in the Aegean during this period. Figure 3 shows the modal split of domestic passengers who travelled to the islands. The destinations are amongst the ones with the highest demand for traffic, representative of the complexity of the Aegean market, with varying demand levels, seasonality, and proximity to Athens. The years considered are chosen so as to be indicative of the market developments already examined in the previous paragraph.

Passenger choice is more than likely influenced by cost. The lower levels of fares charged by boat companies seem to attract the majority of passengers for most destinations, with air travel holding on average between 30 and 40% of the demand. Air travel appears to have a better share of the market till 2001, after which a general decrease is registered till 2005. From then on a slow gradual increase brings the modal split close to the levels of the beginning of the decade. Higher air share is evident in destinations with all year demand (like Chania and Heraklion in Crete) indicating that passengers traveling for purposes other than leisure benefited from the entry of new airlines in the market. Distance emerges as another factor affecting the modal split. Boat appears to be the mode of choice for destinations closer to Athens. In contrast, Rhodes being the most distant island from Athens has constantly a high air percentage which in most years exceeds 50%. Therefore, for longer distances, most passengers appear willing to accept the higher cost of the airfare. The third factor with some

significance in modal choice is the period of the year. At destinations with highly seasonal demand (like Mykonos) the vast majority of passengers are tourists (considering boat travel as part of their vacation experience). On the other hand for islands with more permanent residents (and therefore higher winter demand like Heraklion) winter travel by airplane is probably preferable due to better handling of weather.

Figure 3
Percentage of air demand for selected island destinations



Note: air transport missing data for 2001 replaced with 2000 figures here.

Source: EUROSTAT, own calculations.

4. Looking into the passengers

The use of secondary data is helpful in understanding a market only up to a point. A more detailed look into the profile of the passengers should help to uncover the underlying reasons for their behaviour. Also, through their preferences, it is possible to examine the reactions that they would have in possible changes of the service levels. The analysis of the passenger behaviour is also important as the competitive relationship in a market is not only reflected in consumer behaviour but also influenced by it. The works of Kuksov (2005) and Waterson (2003) suggest that consumers, through their perceptions and buying behaviour will affect the form of the market. Lack of information or force of habit might dissuade consumers from considering alternative options (and therefore reducing competition). This case could easily extend to the transport sector.

In order to better understand the Aegean passenger market a survey was conducted in 2005, a period when both modes were operating in a deregulated environment and the market operated under “normal” economic conditions. In order to better examine the effects of seasonality the research was conducted in two parts (in April for the low season and in June for the high). The destinations examined included Crete, the Dodecanese and the Cyclades, thus providing an interesting and comprehensive mix,

taking account of variety in distance, seasonality and transport demand. In total 650 responses were collected (410 boat passengers and 240 air passengers). Sample sizes were based on average estimated percentages of the modal split of each period. A 10% margin of error was included to account for modal split differences between the destinations.

The most interesting characteristic that emerges from the examination of the passengers profile are the differences between the high and low seasons. As it can be seen in Table 1, the main change is the reason for travel. As expected, leisure is the dominant reason for the summer period, while for the winter months the reasons seem more uniformly distributed, with air transport being preferred for work related trips. The effect of the difference in cost can be seen from the monthly income range of the passengers, with airplane being generally more “afforded” by the middle and high income ranges. Again seasonality plays an effect with the differences being more evident in summer. Differences exist also in the travelling group. The airplane is preferred mostly by people who travel alone during winter, with their percentage being almost half of those in boats. The picture changes during summer, when group travelling is the majority for both modes and especially for sea transport. Frequent travellers seem to prefer the airplane, especially during the winter period. As far as age distribution is concerned, generally air transport seems to be mostly preferred by people in the middle age category, with small changes relating to seasonality. Finally, even though men seem to travel more there doesn’t appear any significant difference.

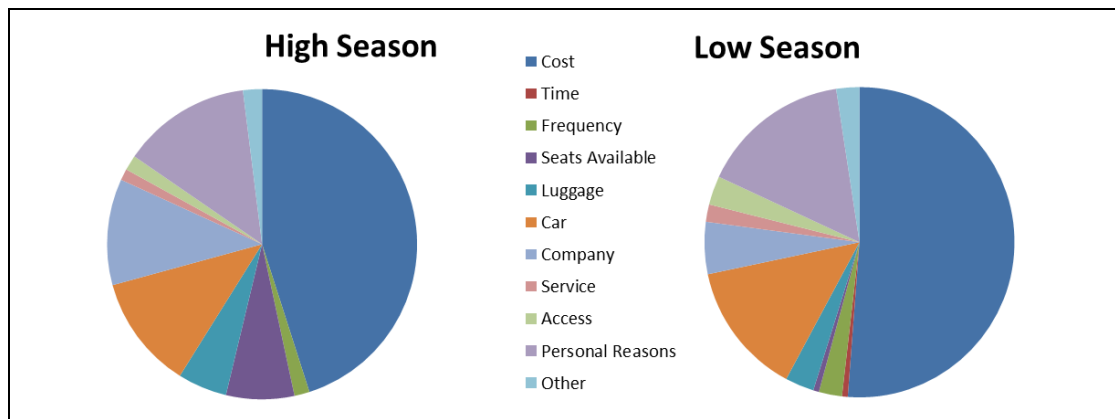
Table 1
Passenger profile

Passenger Profile					
		– Low Demand Season		– High Demand Season	
		<i>Air Transport</i>	<i>Sea Transport</i>	<i>Air Transport</i>	<i>Sea Transport</i>
<i>Sex</i>	Male	60%	55%	55%	56%
	Female	40%	45%	45%	44%
<i>Age Distribution</i>	Under 18 years	2%	11%	4%	7%
	18 – 30 years	28%	30%	20%	33%
	30 – 50 years	50%	32%	50%	40%
	Over 50 years	20%	27%	26%	20%
<i>Reason for Travel</i>	Business	46%	26%	25%	13%
	Leisure	30%	34%	60%	67%
	Personal (including Health)	24%	40%	15%	20%
<i>Travel Group</i>	Alone	70%	44%	48%	25%
	With Friends/Family	30%	56%	52%	75%
<i>Frequency of Travel</i>	Less than twice/year	20%	22%	50%	40%
	2 – 10 times/year	40%	55%	32%	48%
	More often	40%	23%	18%	12%
<i>Income Range</i>	Up to 500 €	13%	26%	17%	35%
	500 – 1000 €	19%	35%	12%	30%
	1000 – 1500 €	29%	25%	26%	18%
	1500 – 2000 €	19%	10%	28%	13%
	Over 2000 €	20%	4%	17%	4%

In the same survey passengers were asked to reveal their preferences in an attempt to uncover areas of competitive relationship between modes of transport. Concentrating on those passengers who chose to travel by sea to their island destination a number of interesting observations were made. The first question relates to the reason for not choosing the other mode as presented in Figures 4 and 5.

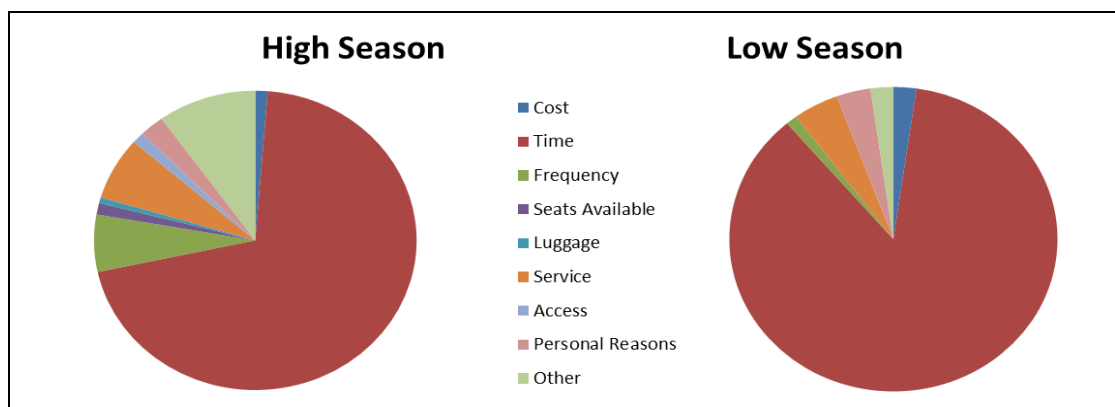
There are almost no significant differences between the two seasons. The only exceptions appear for summer period, when there is a percentage (almost 8%) of boat passengers that were willing to travel by air but could not find available seats. Cost is understandably the main factor influencing choice; it is not however the only one. As the responses show there is an important part of the market (reaching 25%) for which airlines cannot compete. These are people that travel along with their private vehicle or who have a personal reason (usually fear) for not preferring to fly. On average 10% declared that they travel as group, with another 10% stating various reasons (like extra luggage, access etc).

Figure 4
Reasons for not choosing the airplane



On the other hand, passengers that travelled by air have a more homogenous approach as to why the boat was not their preferred option. It is clear during both high and low season that trip duration is the dominant reason that affects their choice. During the high season frequency and service levels also influence their choice.

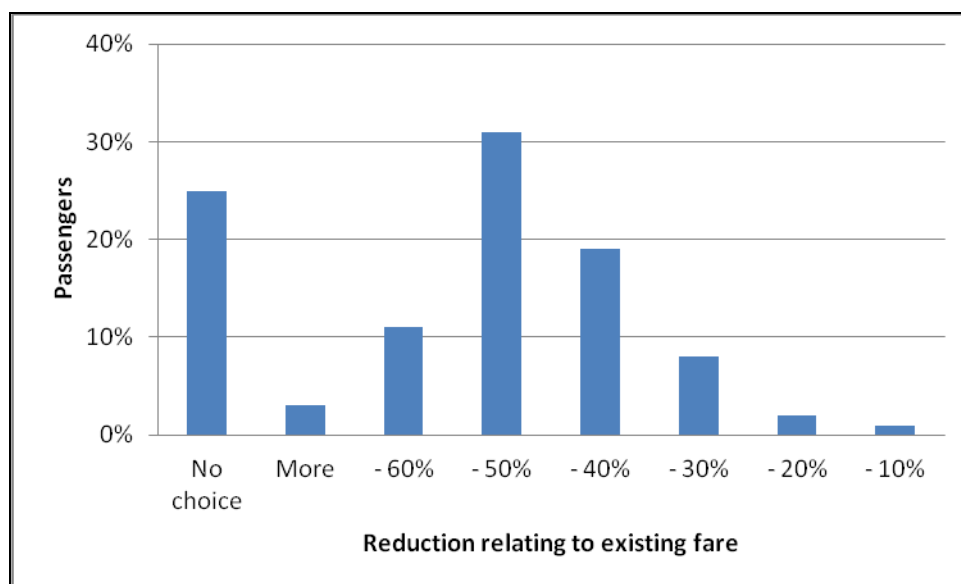
Figure 5
Reasons for not choosing the boat



Passengers were asked also to state the air fare which would have made them modify their choice. Only a small percentage of the passengers approached refused to answer this question with further analysis of their profile showing no significant difference. No significant differences were observed relating to seasonality, nevertheless a small (and understandable) difference related to distance from Athens indicating a positive relationship with the accepted fare level. An average of the responses is presented in Figure 6, presenting the stated accepted air fare as percentage reduction of the actual fare for the period.

The picture emerging is that a small reduction on air fares would have minimal impact on sea demand. For greater levels of reduction however the effect becomes more significant, showing an interesting potential. This can be further illustrated when the difference in fares is considered. On average economy fares for boats tended to be around 30-40% of equivalent for airplanes, indicated that on cases passengers were willing to pay double the boat fare in order to fly. It could be argued therefore that the cross elasticity of demand is low for small price changes, only to increase as the price is further reduced. The final percentage of 25% of passengers not willing to fly under any circumstances appears consistent with the results of the reasons for not choosing to fly.

Figure 6
Preferred air fare

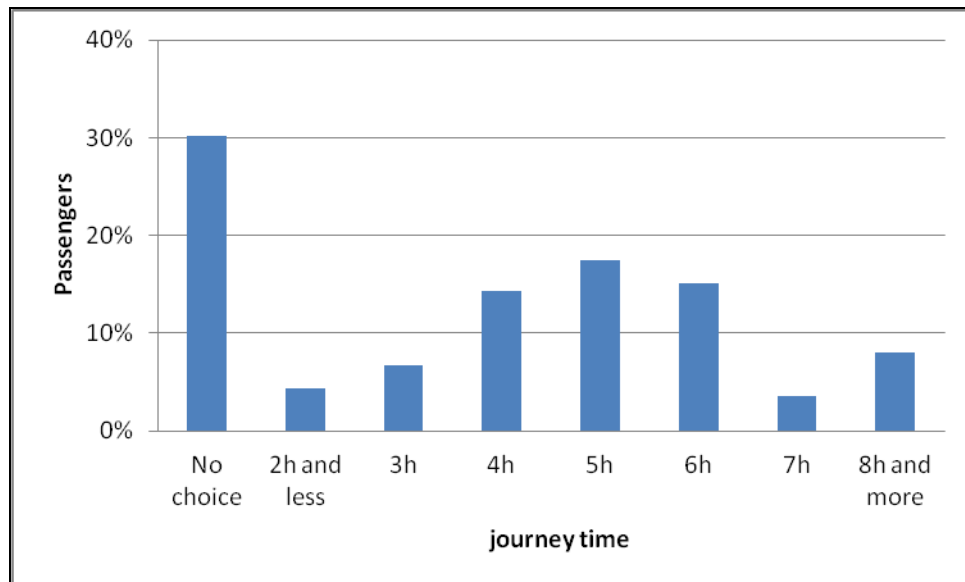


Conversely, air passengers were asked to indicate the trip duration by boat which they would consider acceptable for their journey. Again, response levels to this question were high. While no significant differences appeared due to seasonality, an expected difference exists due to distance from Athens. An average of the responses is presented in Figure 7, showing the stated preferred sea journey duration.

Here the majority of passengers were of the opinion that ferries are not able to provide them with the trip duration that they are willing to accept. It is evident however that the majority of passengers would be willing to change their choice if the sea journey was no more than 6h (almost 40%). Taking into consideration the

difference in distance between the destinations, a similar cross elasticity of demand effect appears.

Figure 7
Preferred sea journey duration



5. Strategies for competition

The above examination of the market and passenger characteristics suggests that the introduction of a deregulated framework did change the relationship of the two modes serving the Aegean islands. The market appears to be split in two different periods due to seasonality, with the summer one showing more potential for competition. Even though differences exist in the profiles of the passengers, these are not so intensive as to form totally different market segments. Finally the views of the passengers gave indications on the factors affecting modal choice and the effects of a change in fares. These findings can help identify potential strategies that would increase the competitive relationship of air and sea transport. A look at the levels of demand registered for these modes leads to the conclusion that air transport has more to gain from such a development as even a small shift of sea passenger would translate in a significant increase of air demand.

5.1 Business as usual

Given normal economic conditions, the strategies to be followed by an air operator would tend to concentrate on the fare policy. The introduction of a variable and flexible fare structure (price discrimination) would help an airline expand in more market segments and at the same time increase its load factors. The above analysis identified a number of potential segments to be targeted, like people travelling in groups, frequent flyers, etc.

Of course reduced fares could be offered through the introduction and application of a different business model. The approach of Low Cost Carriers could appear as a

viable and positive strategy especially when the cross elasticity is taken into consideration. Difficulties however could arise on the infrastructure side (absence of alternate airport in the Athens catchment area) and congestion of island airports during summer period. Passenger perceptions could also play a role as they might not be willing to accept a reduction in service levels.

There are other strategies that could be followed, which concentrate on improvements in service levels. An increase of frequency especially during the summer period would be worth examining as the research data showed, that there is an almost 7% of people who travelled by boat who were unable to find available seats with an airline. This strategy might be better implemented through the use of smaller (regional) aircraft, which are better suited for short journeys and smaller island airports. On the down side an increase in frequency might not be operationally or economically feasible due to infrastructure constraints (mainly congestion).

On the other hand maritime companies, as explained above, have less to gain from an increase in the competition. Still, the answers of the passengers indicate in which areas they can improve their services. Given that the dominant issue presented is trip duration there are two main paths of action. The first focuses on the reduction of trip duration. This could either be brought about through an increase in the average speed, or through a restructuring of the routing plan to include more direct itineraries or itineraries with less stops. In the first case the problem that arises has to do with the increase in costs, through the higher need for fuel. Also time savings might be offset through the time spent in the numerous stops that the typical itinerary has. The second case deals exactly with this problem, but would require a restructuring of the routing and the lines in the Aegean.

The second path of action could focus on enhancing the on-board experience for the passengers so that they in turn are willing to accept the longer trip duration. This strategy would require investments in the type of vessels aiming to approach more the model of a cruise ship than a simple “people-carrier-vessel”. Some of the higher investment costs could be offset through increased revenues from on-board shops and other entertainment activities.

5.2 Under difficult economic conditions

The operating environment under difficult economic conditions (such as the current economic crisis), limits the strategies available for both operators. In broadly defining the current economic crisis, the following characteristics can be identified. First of all, a decrease in the disposable income of the passengers will have a direct impact in the demand for travel services (especially for leisure). This doesn't necessarily have to be the case for the international demand as foreign tourists might be attracted by the prospects of cheaper vacation. An indication of that was seen earlier with the increase in international air demand in 2010. At the same time the operators are faced with increased operating costs, mainly due to the increase in cost of fuel (even though some form of decrease in manning cost might be expected) and therefore the existing vessels might not be operationally viable any more. Finally the difficulty in obtaining new loans which could be alternatively used to refinance older loans, cover operating losses during the crisis, or for investments.

In such an environment a reduction in the market size, as well as a consolidation of the operators, might be expected. And indeed this seems to be the reaction so far. Arguably the two modes would more than likely behave more in a complementary

nature along the traditional lines described earlier in this paper. However, even in this environment there are competitive strategies that both modes can follow.

The air market has the benefit of the first contact with foreign tourists. A fare policy that would encourage and attract tourists to visit the Aegean islands (maybe as part of a complete holiday package in co-operation with tour operators) would help increase the overall demand level. This would more than likely need to be combined with a well-designed flight schedule that would facilitate transfers from international to domestic lines. Airlines might also consider offering connections to smaller islands not only through Athens but also through other islands with international airports (for example linking the smaller Dodecanese islands through Rhodes). While the first part of this strategy might be easier to implement, the second could offer difficulties especially if there is need for increased frequency (and therefore operational costs) or lack of appropriate fleet composition.

On the other hand, the ferry operators would be expected to focus mainly on cost aspects. Still, an option to consider would be that of a radical restructuring of the sea network. This could be developed through the use of a number of main –trunk- lines which would serve the main island destinations. These islands would then be further connected through secondary –feeder- lines with the smaller destinations. This would combine the benefits of higher utilisation of the existing main vessels with the reduction in trip time (due to reduction of costs. At the same time the feeder lines could be served by smaller vessels with better operating results. Nevertheless the downside would be the increased trip duration for the smaller island destinations and possible difficulties in investing for the smaller vessels.

6. Conclusions

This paper set out to examine the competitive relationship of two quite different transport modes (namely air and sea transport) offering domestic scheduled services. The traditional view that they both operate in a more complementary role has been challenged through recent research, which has provided indications that competition could evolve. The Aegean insular region provided a unique case study in order to study this relationship. As a first step an evaluation of the market was conducted followed by an analysis of the results of a passenger survey in an effort to uncover the circumstances and conditions under which competition exists. Finally an attempt was undertaken to identify possible strategies to increase competition both during a “business as usual” period as well as during an economic crisis.

Based on the above findings it could be argued that deregulation had positive effects in the Aegean passenger market, which were not contained on the mode themselves but also expanded to the relationship between them. They no longer operated in completely separate market segments and this is reflected in passenger perceptions. Time of year and distance seem to play a role, with competition increasing with distance and being more evident in summer. The examination of passengers’ profiles showed few differences, clarifying mostly the market segments for which no mode can compete, with their perceptions offering insight on factors affecting modal choice and their influence.

Air transport was identified as having the most potential to gain from an increase of the competition with sea transport, and a number of strategies were identified (mainly through cost reduction) which could lead to this direction. For maritime transport, the strategies considered focused on the element of time, as this was indicated by air passengers as the strongest dissuading factor. The result of these

policies would increase the attractiveness of the transport “product” for both modes, with possible positive results in generating new demand. The extent of such an effect would need to be further examined. Of course it should be noted that the exact mixture and application of policies would depend on each individual case (even on specific routes) so this paper is limited on providing a broader overview with some general guidelines.

The economic crisis that appeared after 2008 has changed the rules of the game. The new operational environment led to reduction and market consolidation, with the two markets reverting to a more complementary relationship. Understandably the main focus of the operators under these conditions would be on costs. Nevertheless, possible competition strategies under this environment were also considered. These revolved round increase in overall demand levels and network restructuring.

Overall, the condition of both markets can be considered as fluid and under transition, and its final form will depend on the intensity and the duration of the crisis. As such any predictions on the future developments would contain a high element of uncertainty. Should the market recover, the experience from the past decade shows that there is a likelihood that it would stabilise in a more-or-less competitive form. On the other hand the risk is that the crisis would deepen which would lead to oligopoly or even monopoly conditions. Under these conditions it is the smaller islands with lower demand levels that are expected to suffer a higher percentage of the effects, with PSOs continuing to play an important role. Nevertheless, as any crisis presents also opportunities for the future, the stimulation of a discussion on competitive strategies could present solutions to minimise the effects of the crisis and prepare the market for an eventual stabilisation and recovery. The final form of the market, therefore, remains to be seen.

Acknowledgments

This paper updates and expands an earlier version under the title: AIR AND SEA TRANSPORT: STRATEGIES TO INCREASE COMPETITION, presented at the 1st International Scientific Conference: Competitiveness and Complementarity of Transport Modes - Perspectives for the Development of Intermodal Transport, University of the Aegean, 10-12 May 2007, Chios, Greece

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